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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/764,392 | 01/19/2001 | Masato Nakajima | 24500 | 7547 |

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| EXAMINER | |
|---|---|
| DASTOURI, MEHRDAD | |
| **ART UNIT** | **PAPER NUMBER** |
| 2623 | |

DATE MAILED: 12/27/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

| Office Action Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 09/764,392 | NAKAJIMA ET AL. | |
| | Examiner | Art Unit | |
| | Mehrdad Dastouri | 2623 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *18 October 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1,4-10 and 12-15* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,4-10 and 12-15* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

## DETAILED ACTION

### *Continued Examination Under 37 CFR 1.114*

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on October 18, 2004 has been entered.

### *Response to Amendment*

2. Applicants' amendment filed July 19, 2004, has been entered and made of record.

### *Response to Arguments*

3. Applicants' arguments have been fully considered but they are not persuasive.

Regarding Claim 1, Applicants argue in essence that Kazuyuki et al. '450 (Secondary prior art of record) do not disclose a judgment means for judging whether the attribute of the rectangle region is one of a "table" a "photograph," and a "frame" according to the number of peaks detected from the projection data.

The Examiner disagrees and indicates that Kazuyuki et al. '450 clearly disclose this limitation as depicted in Figures 6, 8 and 17-19 (e.g., Figure or Photograph if $W \geq T_{w4}$ and $H \geq T_{w4}$ and $D \geq T_{d5}$).

It is further submitted that Claim 1 does not recite "modifying a rectangle image in accordance with attribute information thereof". Kamada et al. '694 (Primary prior art of

record) clearly disclose modification specifying means and modification image making means of the extracted regions as explained in the Office Action in detail. There is no requirement for indicating that Kazuyuki et al. '450 (Secondary prior art of record) also disclose the same limitation.

Applicants' arguments are against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Other prior arts of record are cited for particular limitations of the dependent claims (i.e., Koga et al. and Tabata et al.), and those prior arts are not required to disclose the same teachings of Kamada et al. or Kazuyuki et al.

Analogous response presented for Claim 1, are also applicable to Applicants arguments concerning claims dependent on independent claims 9, 14 and 15, and the claims depending on Claims 1, 9, 14 and 15.

***Claim Rejections - 35 USC § 112***

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Regarding Claims 1 and 9 (and Claims 14 and 15 reciting Claims 1 and 9 limitations), the phrase "others" renders the claims indefinite because the claims include elements not actually disclosed (those encompassed by "others"), thereby rendering the scope of the claim(s) unascertainable. See MPEP § 2173.05(d).

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. Claims 1, 4, 5, 7 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over combined teachings of Kamada et al (U.S. 6,466,694) and Kazuyuki et al (EP 0 587 450).

Regarding Claim 1, Kamada et al disclose a document modification apparatus for modifying image data read by image input means, comprising:

region extracting means for extracting a plurality of regions from the image data, each being a unit to be modified (Figure 1A, Region Identifying Unit 2; Figure 2, Extracting Unit 15, Identifying Unit 11; Column 5, Lines 1-46; Column 6, Lines 49-61);

region selection means for selecting target regions to be modified from the plurality of regions through an operator (Abstract; Figures 2-4; Column 5, Lines 31-40; Column 6, Lines 62-67, Column 7, Lines 1-10; Column 7, Lines 41-67, Column 8, Lines 1-11; Column 10, Lines 10-18);

modification specifying means for specifying kinds of modifications for the target regions selected by the region selection means through the operator (Figures 2-4; Column 7, Lines 41-67, Column 8, Lines 1-11); and

modification image making means for making a modified image, based on the kinds of the modifications, in the regions in the image data selected by the region

selection means, specified by the modification specifying means (Figures 2-4; Column 9, Lines 36-67, Column 10, Lines 1-18);

wherein the region extracting means extracts rectangle regions as the target regions to be modified, and the region extracting means comprises a first judgment means for judging whether an attribute of the rectangle region is one of a "character" and "ruled-line" (Figure 2, Identifying Unit 11; Column 5, Lines 1-2; Figure 3-14; Column 6, Lines 49-67, Column 7, Lines 1-10; Column 10, Lines 25-67, Column 11, Lines 1-24), and a second judgment means for judging whether the attribute of the rectangle region is one of "table", "photograph" and a "frame" (Figure 2, Recognizing 12; Column 5, Lines 3-4; Figure 3-14; Column 6, Lines 49-67, Column 7, Lines 1-10; Column 10, Lines 25-67, Column 11, Lines 1-24).

Kamada et al do not specifically disclose the judgment for identifying details of process performed by second judgment means.

Kazuyuki et al, in the same field of endeavor concerning identifying and categorizing different portions of an input document image as being "character", "ruled-line", "table", "photograph", or the like, disclose a document image processing system comprising projecting means for taking a projection data in vertical and horizontal directions of the extracted rectangle regions to judge the attribute of the rectangle region, whose attributes has not been judged to be "character" or "ruled line", is one of a "table", "photograph" and a "frame" according to a number of peaks detected from the projection data (Figures 8, 18, 19 and 21; Columns 10, 16 and 17).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine teachings of Kamada et al and Kazuyuki et al to identify different portion of a document image using a projection analyzing method in the vertical and horizontal directions because it is a conventional technique routinely implemented in the art (Kazuyuki et al, Column 1, Lines 22-34, as disclosed in JP-A-1-15889). This conventional methodology will result in more accurate and reliable categorization of document image content.

Regarding Claim 4, Kamada et al further disclose a document modification apparatus according to Claim 1, wherein the region extracting means integrates the rectangle region, whose attribute has been judged as "character" by the first judgment means, per line and paragraph (Figures 8, 10, 19-26, 34 and 35; Column 14, Lines 1-14), and

The region selection means selects the target region to be modified per line and paragraph through the operator (Figures 22-26; Column 14, Lines 15-67, Column 15, Lines 1-25).

Regarding Claim 5, Kamada et al further disclose a document modification apparatus according to Claim 1, wherein the region extracting means displays on a display screen the rectangle regions extracted by the region extracting means with the image data read by the image input means, and selects whether each rectangle region on the display screen is modified or not through the operator (Figures 22-26; Column 14, Lines 15-67, Column 15, Lines 1-25).

Regarding Claim 7, Kamada et al further disclose a document modification apparatus according to Claim 1, wherein the modification image making means comprises memory means for storing position information of the selected rectangle regions by the region selection means and the modification information regarding the kinds of the modifications specified by the modification specifying means (Figure 36, Memory 62; Column 6, Lines 62-67, Column 7, Lines 1-25), and

The modification image making means performs the modification for the image data read by the image input means based on the position information and the modification stored in the memory means (Figure 36, Memory 62; Column 6, Lines 62-67, Column 7, Lines 1-25)

With regards to Claim 14, arguments analogous to those presented for Claim 1 are applicable to Claim 14. Kamada et al further disclose image output means for outputting the modified image obtained by the document modification apparatus (Figure 3A, Displaying Unit 25).

8. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over combined teachings of Kamada et al (U.S. 6,466,694) and Kazuyuki et al (EP 0 587 450) in view of Koga et al (U.S. 5,717,794).

Kamada et al and Kazuyuki et al do not explicitly disclose further limitations of Claim 6.

Koga et al disclose a document recognition and editing system, comprising a modification specifying means which displays an at-a-glance menu showing information regarding kinds of modifications, and selects the modification, to be applied to the

selected rectangle regions, from the kinds of the modifications shown in the at-a-glance menu through the operator (Figures 15 and 17; Column 15, lines 12-20; Column 16, Lines 13-67).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Kamada et al and Kazuyuki et al combination according to the teachings of Koga et al to implement further limitations recited in Claim 6 because it will expedite document modification process and will minimize processing error.

9. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over combined teachings of Kamada et al (U.S. 6,466,694) and Kazuyuki et al (EP 0 587 450) in view of Tabata et al (U.S. 4,785,296).

Kamada et al and Kazuyuki et al do not explicitly disclose further limitations of Claim 8.

Tabata et al disclose a document modification method and system for displaying image data comprising resolution conversion means for changing a resolution of the input image data to a reduced image (Abstract; Figure 1, Reduced image 12); and display means for displaying the reduced image obtained by the resolution conversion means with a rectangle region extracted by the region extraction means (Abstract; Figure 1, Rectangular Block 13; Column 2, Lines 63-68, Column 3, Lines 1-7).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Kamada et al and Kazuyuki et al combination according to the teachings of Tabata et al to implement further limitations recited in Claim 8

because it will provide efficient and economic interactive processing of a complex document (Tabata et al; Column 1, Lines 54-58).

10. Claims 9, 10, 12, 13 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over combined teachings of Kamada et al (U.S. 6,466,694) and Kazuyuki et al (EP 0 587 450) in view of Kodaira et al (U.S. 6,043,823).

With regards to Claim 9, arguments analogous to those presented for Claim 1 are applicable to Claim 9. Kamada et al and Kazuyuki et al do not explicitly disclose automatic modification means for automatic selection and modification of the selected regions.

Kodaira et al disclose a document processing system which can automatically select and modify regions of a document (Column 2, Lines 26-41; Column 13, Lines 27-54).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Kamada et al and Kazuyuki et al combination according to the teachings of Kodaira et al to perform automatic selection and modification of the selected regions because it will expedite document modification process, minimize processing error and eliminate the burden of time-consuming manual modification by the user.

With regards to Claim 10, arguments analogous to those presented for Claim 2 are applicable to Claim 10.

With regards to Claim 12, Kodaira et al further disclose the document modification apparatus according to Claim 1, wherein the image input means converts

the input image data to binary image data (Figure 3, Step ST301, Binarization Processing).

With regards to Claim 13, arguments analogous to those presented for Claim 12 are applicable to Claim 13.

With regards to Claim 15, arguments analogous to those presented for Claim 9 are applicable to Claim 15. Kamada et al further disclose image output means for outputting the modified image obtained by the document modification apparatus (Figure 3A, Displaying Unit 25).

***Contact Information***

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mehrdad Dastouri whose telephone number is (703) 305-2438. The examiner can normally be reached on Monday to Friday from 8:00 a.m. to 4:30 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amelia Au can be reached on (703) 308-6604. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Mehrdad Dastouri
Primary Examiner
Art Unit 2623
December 22, 2004

MEHRDAD DASTOURI
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